comes of adding biphasic insulin aspart 30 to metformin and pioglitazone (BIAsp30 + met + pio) compared to maintaining optimized oral therapy alone (met + pio). **METHODS:** Treatment efficacy, safety, and baseline demographic data of patients randomized to either therapy were derived from a recent 34-week controlled trial (n = 200; mean age 53.8 years; baseline HbA1c 8.1%; BMI 32.9 kg/m2; 42% male). Over the trial period, significant improvements in HbA1c were demonstrated for BIAsp30 + met + pio (–1.5 % between arms; $p < 0.0001$), though minor hypoglycaemia increased ($p < 0.01$). A validated and peer-reviewed economic model utilizing 2nd order Monte-Carlo simulation with tracker variables and non-parametric bootstrapping (15 interdependent Markov sub-models of diabetes-related complications) calculated life expectancy (LE), quality-adjusted life expectancy (QALE), incremental cost-effectiveness (ICER), and cumulative complication events over 35 years (base-case). Total management costs were calculated (annual pharmacy plus complication; US Medicare perspective). Clinical and cost outcomes were discounted at 3% per annum. Sensitivity analyses were performed. **RESULTS:** End-of-study clinical improvements demonstrated with BIAsp30 were projected to increase LE (0.66 years), QALE (0.55 quality-adjusted life years (QALYs)), and reduce cumulative incidences of diabetes-related complications, notably retinopathy, renal, and cardiovascular disease. An ICER of $22,209/QALY gained was generated, with an acceptability curve (willingness-to-pay of $50,000/QALY) portraying BIAsp30 to have a 98.4% probability of being cost-effective. Sensitivity analyses supported these results. **CONCLUSION:** Type 2 diabetes patients may significantly improve glycaemic control with BIAsp30 versus optimizing oral therapy alone. Through long-term health outcome projections, BIAsp30 was estimated to improve quality-adjusted life expectancy and reduce diabetes-related complications in a cost-effective manner.

PDB23

THE COST-EFFECTIVENESS OF INHALED INSULIN IN SWEDEN

Neovius M[1], Prüz C[2]
[1]Karolinska University Hospital, Stockholm, Sweden, [2]Pfizer AB, Stockholm, Sweden

OBJECTIVE: To estimate the cost-effectiveness of inhaled insulin (INH) in Type 1 (T1DM) and Type 2 diabetes mellitus (T2DM) patients uncontrolled on current treatment. **METHODS:** Cost-effectiveness analysis was conducted from Swedish health care perspective using the Economic Assessment of Glycemic control and Long-term Effects of diabetes (EAGLE) simulation model. EAGLE uses risk equations for the probability of micro- and macrovascular complications derived from UKPDS, WESDR and DCCT. Patient characteristics were obtained from the Swedish National Diabetes Registry. Complication costs and health-state utilities were taken from the literature. Equivalent efficacy was assumed for inhalation and standard insulin regimens. INH was assumed to result in earlier initiation or better intensification of insulin therapy. Data on intensification inertia were taken from a retrospective study and intensification differential (between INH and standard treatment) was taken from published literature. The analysis was performed over a 20 y time-horizon. Costs (SEK2005) and quality-adjusted life-years (QALYs) were discounted by 3% per annum. **RESULTS:** Treatment costs were higher for all subgroups using INH, while the costs of complications were lower, and survival and utility higher. ICER's for INH compared to staying uncontrolled on basal-bolus for T1DM and T2DM were SEK 38,948 and SEK 151,186/QALY, respectively. In T2DM patients uncontrolled on °Ý2 orals ICER's for INH compared to intensifying to basal or mix-insulin were SEK 178106 and SEK 16,2294/QALY, respectively. For patients uncontrolled on basal insulin ICER's for INH compared to intensifying either to mix-insulin or basal-bolus were 265,376 and 232,442SEK/QALY, respectively; and in patients on mix-insulin the ICER's for INH compared to intensifying to basal-bolus were 183,132SEK/QALY. Results were robust to changes in discount rate and intensification differential, although more sensitive to the level of treatment-associated utilities. **CONCLUSION:** For T1DM and T2DM patients uncontrolled on current treatment, a regimen including INH appears to be cost-effective when taking long-term micro- and macrovascular outcomes into account.

PDB24

COST OF A MAJOR HYPOGLYCAEMIC EVENT IN TYPE 1 AND TYPE 2 DIABETIC PATIENTS—A SYSTEMATIC LITERATURE REVIEW

Lilja U[1], Asmussen M[2], Lindgren P[1]
[1]Stockholm Health Economics, Stockholm, Sweden, [2]Novo Nordisk, Bagsvaerd, Denmark

OBJECTIVES: The largest proportion of costs in diabetes is due to complications of the disease. Hypoglycaemia is a common, chronic complication of drug treatment in diabetes. The aim of this study was to survey the cost of a major hypoglycaemic event. **METHODS:** A systematic literature review was carried out on all relevant assessments found in published literature. A study was regarded relevant if it included the cost of a major hypoglycaemic event. **RESULTS:** Relevant studies were found in the following countries: Canada, Germany, Sweden, Switzerland, UK and US. Five studies collected primary data and six studies based the cost of a hypoglycaemic event on assumptions around treatment patterns. A major hypoglycaemic event was defined differently in the different studies. Four studies defined the state as requiring third-party medical intervention which means assistance from health care services with costs ranging from €293 to €586. The state was also defined as requiring third party assistance by medical and/or family assistance in four studies, these estimates ranged from €190 to €1643. One study defined the state as requiring assistance from another person excluding medical intervention (€69), while two studies defined the state from the ICD-9-CM codes, which requires a visit to a health care provider and presented costs at €950 and €4083, respectively. The difference in costs between the studies can be explained by different health care systems, whether direct and/or indirect costs were included and whether hospitalisation was excluded. Indirect costs were included in three studies. **CONCLUSIONS:** Which costs to include in a study is determined by which definition of a major hypoglycaemic event that is chosen. For this reason it is important that health economic models apply matched definitions to the clinical studies they are modelling.

PDB25

COST OF INPATIENT AND OUTPATIENT CARE OF SWEDISH PATIENTS WITH DIABETES MELLITUS

Ringborg A[1], Berwick S[1], Stålhammar J[2], Martinell M[2], Lindgren P[1]
[1]European Health Economics, Stockholm, SE, Sweden, [2]Uppsala University, Uppsala, Sweden

OBJECTIVES: The present analysis estimated overall annual inpatient and outpatient costs incurred by Swedish patients with diabetes mellitus between 2000 and 2004 based on data from the RECAP study, which included medical records on 13,873 patients with diabetes mellitus retrospectively identified in computerised registers at 26 primary care centres in Uppsala county. Patients included in the study fulfilled at least one of the fol-